

## WHAT IS CLAIMED IS:

1. A method for classifying blocks of data comprising the steps of:
  2. capturing a block of non-textual data using a recording device
  3. for which settings for data-capture attributes are indicative of characteristics
  4. of said non-textual data;
  5. linking meta-data with said block of non-textual data, said
  6. meta-data corresponding to at least one said data-capture attribute during
  7. said capture by said recording device; and
  8. performing automated processing to assign description to
  9. contents of said block, including utilizing said meta-data in determining said
  10. description.

1       2. The method of claim 1 wherein said step of capturing includes  
2 recording at least one of an image file by an image-capture device and audio  
3 file by an audio recorder

1       3. The method of claim 1 wherein said step of linking includes obtaining  
2       exposure information that identifies an exposure setting of said recording  
3       device.

1       4. The method of claim 1 wherein said step of capturing further includes  
2       configuring said block as a file of non-textual data in a digital format and  
3       wherein said step of linking includes forming a tag to said file, said tag being  
4       indicative of a plurality of exposure time, automatic gain, film speed, shutter  
5       speed, white balance, aperture/lens index, focusing index, and flash/no flash  
6       operation.

1       5. The method of claim 1 further including a step of transmitting said  
2 block of said non-textual data and said meta-data from said recording device  
3 to a computer for performing said automated processing.

1       6.     The method of claim 1 wherein said automated processing includes  
2     analyzing said non-textual data and said meta-data to identify content-based  
3     information and manipulating said content-based information to derive said  
4     description.

1       7.     The method of claim 6 wherein said step of analyzing includes applying  
2     digital signal processing (DSP) to said non-textual data.

1       8.     The method of claim 1 wherein said step of performing said automated  
2     processing includes assigning a semantic expression to said block of non-  
3     textual data for use as at least one descriptor for one of organizing said  
4     blocks of data and matching a query during a search for said block of non-  
5     textual data.

1       9.     A system for classifying subject data comprising:  
2                a recording device for capturing non-textual subject data and for  
3     recording meta-data, said meta-data being specific to an operational mode of  
4     said recording device during capturing of said non-textual subject data; and  
5                a processor configured to implement a classification technique  
6     utilizing both of said non-textual subject data and said meta-data for  
7     identifying at least one classifier, said classifier being representative of an  
8     attribute of said subject data.

1       10.    The system of claim 9 wherein said recording device is a digital  
2     camera.

1       11.    The system of claim 9 wherein said operational mode of said recording  
2     device is based on a state as determined by at least one of exposure time,  
3     auto gain setting, film speed, shutter speed, white balance, aperture/lens  
4     index, focusing distance, and flash/no flash operation.

1       12. The system of claim 9 wherein said classification technique is a  
2 sequential progression of decision making comprising a plurality of  
3 classification nodes, at least some of said classification nodes including  
4 algorithms for determining which of a plurality of alternative next classification  
5 nodes is to be encountered in said sequential progression of decision making.

1       13. The system of claim 9 wherein said classification technique is a neural  
2 network having an input stage, an output stage and at least one decision-  
3 making stage, said decision-making stage comprising a plurality of  
4 classification nodes, at least some of said classification nodes configured to  
5 receive a plurality of weighted inputs from other classification nodes within  
6 said decision-making stage and from said input stage for generating an output  
7 as a basis for identifying classifiers.

1       14. A method of categorizing files of non-textual data comprising the steps  
2 of:  
3             establishing an evaluation system for decision making, including  
4 using automated processing techniques to define a plurality of algorithms,  
5 said algorithms utilizing both of content-based data and meta-data, said  
6 content-based data corresponding to content information of a file of said non-  
7 textual data and said meta-data corresponding to data-capturing settings of a  
8 data-capturing device during capture of said file of non-textual data;  
9             capturing a file of non-textual subject data; and  
10            processing said file of non-textual subject data through said  
11 evaluation system for decision making to selectively identify a plurality of  
12 classifiers associated with said file of non-textual subject data.

1       15. The method of claim 14 wherein said step of establishing includes a  
2 learning procedure in which said content-based data is extracted from each of  
3 a plurality of learning images and said meta-data is identified for each said  
4 learning image, said meta-data for each said learning image being indicative  
5 of operational conditions of said data-capturing device during capture of said  
6 learning image.

1       16. The method of claim 15 further comprising a step of generating a  
2       plurality of learning classifiers that are descriptive of said learning images,  
3       said step of generating including applying content-based analysis for said  
4       content-based data and meta-data analysis for said meta-data.

Sample	$\rho_{\text{sample}}$ ( $\text{g cm}^{-3}$ )	$\rho_{\text{calcd}}$ ( $\text{g cm}^{-3}$ )	$\rho_{\text{calcd}} - \rho_{\text{sample}}$ ( $\text{g cm}^{-3}$ )	$\rho_{\text{calcd}} / \rho_{\text{sample}}$
1	1.65	1.65	0.00	1.00
2	1.65	1.65	0.00	1.00
3	1.65	1.65	0.00	1.00
4	1.65	1.65	0.00	1.00
5	1.65	1.65	0.00	1.00
6	1.65	1.65	0.00	1.00
7	1.65	1.65	0.00	1.00
8	1.65	1.65	0.00	1.00
9	1.65	1.65	0.00	1.00
10	1.65	1.65	0.00	1.00
11	1.65	1.65	0.00	1.00
12	1.65	1.65	0.00	1.00
13	1.65	1.65	0.00	1.00
14	1.65	1.65	0.00	1.00
15	1.65	1.65	0.00	1.00
16	1.65	1.65	0.00	1.00
17	1.65	1.65	0.00	1.00
18	1.65	1.65	0.00	1.00
19	1.65	1.65	0.00	1.00
20	1.65	1.65	0.00	1.00
21	1.65	1.65	0.00	1.00
22	1.65	1.65	0.00	1.00
23	1.65	1.65	0.00	1.00
24	1.65	1.65	0.00	1.00
25	1.65	1.65	0.00	1.00
26	1.65	1.65	0.00	1.00
27	1.65	1.65	0.00	1.00
28	1.65	1.65	0.00	1.00
29	1.65	1.65	0.00	1.00
30	1.65	1.65	0.00	1.00
31	1.65	1.65	0.00	1.00
32	1.65	1.65	0.00	1.00
33	1.65	1.65	0.00	1.00
34	1.65	1.65	0.00	1.00
35	1.65	1.65	0.00	1.00
36	1.65	1.65	0.00	1.00
37	1.65	1.65	0.00	1.00
38	1.65	1.65	0.00	1.00
39	1.65	1.65	0.00	1.00
40	1.65	1.65	0.00	1.00
41	1.65	1.65	0.00	1.00
42	1.65	1.65	0.00	1.00
43	1.65	1.65	0.00	1.00
44	1.65	1.65	0.00	1.00
45	1.65	1.65	0.00	1.00
46	1.65	1.65	0.00	1.00
47	1.65	1.65	0.00	1.00
48	1.65	1.65	0.00	1.00
49	1.65	1.65	0.00	1.00
50	1.65	1.65	0.00	1.00
51	1.65	1.65	0.00	1.00
52	1.65	1.65	0.00	1.00
53	1.65	1.65	0.00	1.00
54	1.65	1.65	0.00	1.00
55	1.65	1.65	0.00	1.00
56	1.65	1.65	0.00	1.00
57	1.65	1.65	0.00	1.00
58	1.65	1.65	0.00	1.00
59	1.65	1.65	0.00	1.00
60	1.65	1.65	0.00	1.00
61	1.65	1.65	0.00	1.00
62	1.65	1.65	0.00	1.00
63	1.65	1.65	0.00	1.00
64	1.65	1.65	0.00	1.00
65	1.65	1.65	0.00	1.00
66	1.65	1.65	0.00	1.00
67	1.65	1.65	0.00	1.00
68	1.65	1.65	0.00	1.00
69	1.65	1.65	0.00	1.00
70	1.65	1.65	0.00	1.00
71	1.65	1.65	0.00	1.00
72	1.65	1.65	0.00	1.00
73	1.65	1.65	0.00	1.00
74	1.65	1.65	0.00	1.00
75	1.65	1.65	0.00	1.00
76	1.65	1.65	0.00	1.00
77	1.65	1.65	0.00	1.00
78	1.65	1.65	0.00	1.00
79	1.65	1.65	0.00	1.00
80	1.65	1.65	0.00	1.00
81	1.65	1.65	0.00	1.00
82	1.65	1.65	0.00	1.00
83	1.65	1.65	0.00	1.00
84	1.65	1.65	0.00	1.00
85	1.65	1.65	0.00	1.00
86	1.65	1.65	0.00	1.00
87	1.65	1.65	0.00	1.00
88	1.65	1.65	0.00	1.00
89	1.65	1.65	0.00	1.00
90	1.65	1.65	0.00	1.00
91	1.65	1.65	0.00	1.00
92	1.65	1.65	0.00	1.00
93	1.65	1.65	0.00	1.00
94	1.65	1.65	0.00	1.00
95	1.65	1.65	0.00	1.00
96	1.65	1.65	0.00	1.00
97	1.65	1.65	0.00	1.00
98	1.65	1.65	0.00	1.00
99	1.65	1.65	0.00	1.00
100	1.65	1.65	0.00	1.00